

# No sunlight, No soil, No Problem





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#### **Part I: General Overview of Business**

- Kemin Industries was started by R.W. and Mary Nelson in 1961
- "Kemin is a global manufacturer providing local innovative nutritional and health solutions for a changing world." (Kemin.com)
- The Kemin vision states, "We strive to improve the quality of life by touching half the people of the world every day with our products and services." (Kemin.com)

### **Part II: Job Specifics**

Many Kemin products are plant derived.

Kemin has a Specialty Crop Improvement team(SCI) that works with other divisions of Kemin on their plant derived products. SCI works on the following:

- Micropropagation of plants in lab
- Grow and maintain plants in greenhouse and nursery
- Collection and sampling
- Breeding and selection
- Develop best commercial growing practices on research farm.

#### Part III: Introduce the Problem

Kemin needs to ship live plants both domestically and internationally for various business purposes. Guiding questions would include:

- Part 1: How do you ship live plants?What are the regulations?
- Part 2: How could you ship live plants without soil, access to sunlight, and regular watering?

## **Part IV: Background**

Students will need to have an understanding of the following:

- Photosynthesis
- Respiration
- General needs of a plant
- Knowledge of sterile technique
- Awareness of domestic and international shipping regulations for live plants

#### **Part V: Business Solution**

Kemin utilized a sterile growing media with specialized nutrients to help plants survive without sunlight, being watered, or soil.

#### Part VI: Student Solutions

- Send seeds
- Growing media with a variety of nutrient compositions
- Sterile growing media